

first and second network data stations, the first network data station being coupled to one or more first data stations and also coupled to the second network data station, the second network data station being coupled to one or more second data stations, the first network data station comprising:

a receive memory and a transmit memory;

a receive datapath coupled between the communications medium and the receive memory, wherein the receive memory provides at least some data received over the communications medium to the receive memory;

a transmit datapath coupled between the transmit memory and the communications medium wherein the transmit memory provides at least some data from the transmit memory to the communications medium;

a first-in-first-out buffer receiving the at least some data from the transmit memory and holding the data before communicating the data to the second network data station; and wherein the first-in-first-out buffer is configured to output its contents in response to a signal transmitted by the second network data station.

85. (amended) The apparatus of claim 58, wherein the first-in-first-out buffer is coupled to a cascade port, wherein the cascade port is coupled between first and second isochronous hubs without using a backbone network.

97. (amended) The apparatus of claim 90, wherein the processor receives an interrupt that indicates that a signaling channel receiver or transmitter of a physical layer device needs to be processed by the processor.

100. (amended) In a data communication network for communicating isochronous and non-isochronous data between data stations over a communications medium including at least first and second network data stations, the first network data station being coupled to one or more first data stations and also coupled to the second network data station, the second network data station being coupled to one or more second data stations, a method comprising the steps of:

storing data received from the communications medium in a receive memory of the first network data station;

providing data stored in a transmit memory of the first network data station to the communications medium, wherein data received from the transmit memory is buffered with a